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AMERICAN EDUCATION SINCE THE CIVIL WAR¹

IT is the fashion to-day among hasty and confident writers for the newspapers, magazines, and popular booklets to assert that modern civilization has failed, and is going the way of the Assyrian, Egyptian, Greek, and Roman empires; that the world is in chaos and must be made anew after a period of anarchy and suffering. These writers seem never to have perceived, or to have forgotten, that new moral and juridical forces have come into play since Magna Charta, the Protestant Reformation, and the Landing of the Pilgrims, and that all the ancient civilizations were founded on slavery, peonage, or serfdom, monstrous wrongs and evils which have now disappeared in the countries called civilized. Among American writers of this sort there are not a few who declare loudly that American education is a failure, and illustrate this mortifying proposition with a few facts and more speculations. The blame for this alleged unfortunate condition of the American people is variously distributed among parents, teachers, school administrators, school boards, and college and university faculties and presidents. Some of these writers appear to have cloudy visions of remedies for this deplorable failure in the United States of the principal safeguard of democracy; but most of them, like critics and

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cynics in general, dwell much more on the existing evils than on their remedies.

Now, it has happened to me to witness, and take active part in, the development of American education from 1854 to the present day; and the strongest conviction I have derived from this long survey is that the improvement of American education, from top to bottom, from the kindergarten through the professional school, during these sixty-seven years is in high degree encouraging and hopeful. This development has not been steady during the two generations of men, but rather in waves, and at various speeds. Moreover, the waves of educational progress, like ocean waves, are often long-prepared and come from far. The most rapid development has taken place since the opening of the Great War in Europe, being one of the happiest consequences of the entry of the United States into that war, and of the prodigious efforts made by the entire people and their government to take an effective part in it.

It is my purpose in this address to point out some of the important steps in the total development.

In 1854 nearly all schools, elementary and secondary, and nearly all colleges had fixed programmes through which every pupil was to be conducted. Little attention could be paid to the individual child, except sometimes in small rural schools where an exceptional teacher had to deal with only a small group of children of various ages between five and eighteen. Even from such schools, with a term of perhaps only thirteen weeks in winter, the sometimes competent college undergraduate was disappearing as teacher, his place being taken, at the best by some girl graduate of a State normal school, and at the worst by some young woman who could barely read, write, and cipher. In urban communities, girl graduates of normal schools were already in possession

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of the elementary schools and of large parts of the secondary schools, their work being supervised by principals, superintendents, and Boards conservative by nature and training, and aiming to make the school an effective factory, standardized and smooth-running, with a product characterized rather by certified uniformity than by natural diversity. Even the colleges had usually four-year prescribed courses of study, of limited range and elementary quality, with no advanced studies accessible to any student however ambitious and competent. Neither school nor college paid attention to training the senses, to the acquisition of any skill, or to implanting in the pupil's or student's mind the method of the inductive philosophy, or the love of reading. The discipline in both school and college was of the driving, not of the leading, sort.

Into this rigid and comparatively fruitless system came gradually, between 1865 and 1885, the individual election of studies by the student or pupil, first for college students and then for the pupils of secondary schools, and the adoption of the underlying principle that hard and happy work is only to be obtained from the young on subjects which interest the pupil and induce in him eager, spontaneous activities. Interest, choice, and activity had arrived as the motive powers in organized education. In order to discover and gratify the bent of each pupil at school the number of subjects taught in both elementary and secondary schools had to be increased; and in order to enable the college student to follow his bent far, college studies had to be multiplied in number and increased in range. For these purposes a new breed of teachers had to be born and trained—a slow process. By 1880 a considerable number of this new breed had been raised; so that college Faculties began to exhibit a considerable improvement in respect to

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both the quality and the number of their members, an improvement which is still going on. This improvement alone is worth the fifty years of patient effort it has cost.

A corresponding improvement in the teachers of elementary and secondary schools it was not reasonable to expect. The great body of teachers in the elementary schools are young women who on the average do not remain long in the calling. They have to be trained by the thousand in the high and normal schools, which as a rule give little opportunity for the development of unusual individual qualities or capacities. The college and university Faculties ought to be recruited from among persons of unusual promise and often of unusual attainments; and it is the prime duty of college and university presidents to be constantly searching for unusual personalities. The principals and superintendents of schools had at that period small chance to discover and engage such personalities; and indeed they are not much better off to-day.

I recall with a shiver the very imperfect means I possessed in the '70s for discovering the kind of man that I knew ought to be found for any professorship in Harvard University. I had to depend on my own acquaintance with scholarly men, on casual contacts with such persons in travel and at meetings of learned societies, and on advice sought by letter from eminent scholars. Of course there had been leading American scholars and specialists in earlier generations, like Nathaniel Bowditch of "The Navigator," Joseph Story in law, George B. Emerson in trees and shrubs, David Humphreys Storer on fishes, George Ticknor in Spanish literature, and William H. Prescott and George Bancroft in history. In the middle of that century there was a small group of men of high merit as investigators and authors from whom advice could be obtained,

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such as Asa Gray the botanist, Jeffries Wyman the anatomist and physiologist, and Louis Agassiz the zoölogist at Harvard, Benjamin Silliman and James D. Dana at Yale, Maury and the three brothers Rogers of Virginia, and Joseph Henry the physicist of Princeton and the Smithsonian. But these great men were isolated as teachers; so that their influence was felt, not by large groups of students, but mainly by disciples whose previous training had often been unsystematic and peculiar. In those days, too, the numerous associations or societies of men learned in a single branch of knowledge, such as the Classics, law, history, chemistry, physics, engineering, architecture, and physiography, had not come into existence. Since 1890 these societies have furnished university presidents and heads of departments with much valuable information about their leading members, and have revealed to intelligent inquirers the young men of promise.

It took decades to develop even in the strongest universities what are now called Departments, as of Latin, mathematics, or physics, and more decades still to develop what are now called Divisions, in which several Departments are united, as, for instance, the Division of ancient languages, or of modern languages, or of history, government, and economics. So long as it was the practice to have only one professor for each subject—which was the common way—it was of course impossible to create a department. When, therefore, one looks at the existing organization of any considerable American college or university to-day, he cannot fail to observe that a wonderful improvement has taken place in the American university as an instrument of teaching, research, and social progress since the close of the Civil War.

During the period under consideration (1865–1890)

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American education made great gains in respect to training men for the professions, old and new. Prior to 1870 there were no examinations for admission to professional schools in the United States, and, what was worse, there were no effective examinations for graduation. The teaching of law and medicine in those days was probably as good at Harvard University as at any other American university, and the quality of law and medical students at Harvard was as good as anywhere; but the Law Faculty gave the degree of Bachelor of Laws to any man who had paid three term bills (covering eighteen months) and had not been very irregular in attending lectures. When I asked in the Medical Faculty of 1870 if it would be possible to substitute an hour's written examination for the five minutes' oral examination (a five-minute interview with the professor of each of the nine principal subjects then taught in the School) at the examinations for graduation, the answer came promptly from the Head of the Faculty: "Written examinations are impossible in the Medical School. A majority of the students cannot write well enough." Any one who contrasts that state of things with the conditions of admission and graduation in schools of law and medicine to-day in all parts of the United States will be satisfied that improvements in American training for the professions have taken place which are already of immeasurable value, and which promise in the future great gains in all sorts of professional practice, and therefore of professional influence and service. The improvements are quite as striking in the newer professions, like engineering, architecture, landscape architecture, and dentistry, as they are in the older, like divinity, law, medicine, and teaching.

Another great advance in American education since the

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Civil War is the development of separate colleges for women, and the increased resort of young women to the co-educational institutions of higher education. At first, the colleges for women were restricted or hampered in their development, because the object of Faculties and students alike seemed to be to prove that young women could study advantageously all the subjects which had made the staple of instruction in colleges for men, and that young women could in those subjects attain success quite equal to that which young men had previously exhibited. Just as the introduction of new methods of teaching and a new kind of teacher had been restricted in colleges and universities for men by lack of money, so in the separate colleges for women their development was greatly hindered by lack of income. Indeed, this restriction is not yet overcome, although considerable endowments have lately been raised for several women's colleges. As results of the creation and growth of colleges for women in the United States searchers for women teachers can find better trained women for higher places in American schools and colleges, and women have gained access in small numbers to all the older professions called learned and to several of the new ones. They have also won positions—generally secondary ones—in various sorts of scientific research, including biological, physical, chemical, medical, and astronomical. Any one who can recall how limited and inaccessible the education of girls was in the United States—as also in Europe—before the Civil War, will appreciate that the training of women for family, social, industrial, and professional life has made enormous gains in the United States within the last fifty years. Much gain is still to come; for the women students in colleges and universities are now free to pursue the studies of their

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choice or their most appropriate studies, being no longer under the necessity of demonstrating that young women can deal successfully with all the subjects which young men used to deal with.

If, then, there are spots in which American education has failed under new stresses, there are large regions in which it has made immense gains during the past two generations.

In Europe and America alike improvements in popular education have always spread from the top downward and outward, from Luther, Melancthon, Locke, Milton, Montaigne, Kant, Franklin, Mann, Emerson, Spenser, Froebel, Pestalozzi, Seguin, and their like, and from the higher institutions of education to the lower. The United States has supplied a very interesting illustration of this general fact. At the meeting in 1891 of the National Council of Education, an interior committee of the National Education Association, a committee organized at a previous meeting made a valuable report through their Chairman, Mr. James H. Baker, then Principal of the Denver High School, on the general subject of uniformity in school programmes and in requirements for admission to college. That committee was continued, and was authorized to procure a conference on the subject of uniformity during the meeting of the National Council in 1892, the conference to consist of representatives of leading colleges and secondary schools in different parts of the country. This conference was well selected and duly summoned, and held a series of meetings at Saratoga, N. Y., July 7-9, 1892. The discussions at this meeting resulted in the following specific recommendations which the conference sent to the National Council of Education, then in session:

1. That a conference be held of school and college teachers of each principal subject which enters into the pro-

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grammes of secondary schools in the United States and into the requirements for admission to college, each conference to consider the proper limits of its subject in schools, the best methods of instruction, and the most desirable allotment of time for the subject.

2. That a committee be appointed with authority to select the members of these conferences, and to arrange their meetings, the results of all the conferences to be reported to this central committee.

3. That this Committee consist of the following ten persons named, who were the Commissioner of Education at Washington, D. C., four university Presidents, three Principals of high schools, one Professor in a college, and the Headmaster of a well-endowed preparatory school.

These recommendations of the conference were adopted first by the National Council of Education, and then by the Directors of the National Education Association. Those Directors made an appropriation of \$2500 towards defraying the expenses of the proposed conferences—an unprecedented performance on the part of the Association. Every man named on the Committee of Ten accepted his appointment; and the Committee met at Columbia College, New York City, from the 9th to the 11th of November, 1892, inclusive. In preparation for this meeting a table had been prepared by means of a prolonged correspondence with the principals of selected secondary schools in various parts of the country, a table which showed conclusively, first, that the total number of subjects taught in these secondary schools was nearly forty, thirteen of which, however, were found in only a few schools; secondly, that many of these subjects were taught for such short periods that little training could be derived from them; and, thirdly, that the time allotted to the same subject in the different schools varied

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widely for the older subjects as well as for the newer. This picture was striking and in some respects surprising. It indicated the probable scope and nature of the conferences' work.

The Committee of Ten decided on November 10, 1892, to organize conferences on the following subjects: (1) Latin; (2) Greek; (3) English; (4) other modern languages; (5) mathematics; (6) physics, astronomy, and chemistry; (7) natural history, including botany, zoölogy, and physiology; (8) history, civil government, and political economy; and (9) geography (physical geography, geology, and mineralogy), each conference to consist of ten members. The Committee then proceeded to select the members of each of these conferences, ninety in all, and to provide about thirty substitutes. It was fortunately constituted for this function because all the members had wide personal acquaintance among the professors and teachers of the country, and good knowledge of colleges and secondary schools throughout the country. They made their selections with due regard to the scholarship and experience of the gentlemen named, to the fair division of the members between colleges on the one hand and schools on the other, and to the proper geographical distribution of the total membership. The Committee then asked every conference to consider:

1. At what age should the study which is the subject of the conference be first introduced in a school course extending from the age of six years to eighteen years?
2. How many hours a week for how many years should be devoted to it?
3. How many hours a week for how many years should be devoted to it in the ordinary high school period?

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4. What topics or parts of the subject should be covered during the whole course—six to eighteen years of age?

5. What topics or parts of the subject may best be reserved for the last four years?

6. In what form and to what extent should the subject enter into college requirements for admission?

7. Should the subject be treated differently for pupils who are going to college, for those who are going to scientific or technical school, and for those who are presumably going to neither?

8. At what stage, if ever, should this differentiation begin?

9. Can any description be given of the best method of teaching this subject throughout the school course?

10. Can any description be given of the best mode of testing attainments in this subject at college admission examinations?

11. If a college or university permit a division of the admission examinations between two years, can the best limit between the preliminary and the final examinations be defined?

This set of questions touched all the points which had been raised in the discussions about secondary education during the two preceding decades, and anticipated most of those of the two succeeding decades.

The Committee further voted that it was expedient that the conferences on Greek and Latin meet at the same place.

Finally, it left all further questions of detail to the Chairman with full power.

The nine conferences met on December 28, 1892, at seven different places with eighty-eight members present, of whom forty-six were in the service of colleges or universities, forty-one in the service of schools, and one was a Govern-

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ment official. All the conferences sat for three days, and their discussions were frank, earnest, and thorough; but in every conference an extraordinary unity of opinion was arrived at. Only two conferences yielded minority reports, namely, the conference on physics, astronomy, and chemistry, and the conference on geography; and in the first case, the dissenting opinions touched only one important point—out of many—in the report of the majority.

By October 1st the reports of the conferences had all been printed, after revision by the Chairmen of the conferences respectively, and had been distributed to the members of the Committee of Ten, together with a preliminary draft of a report for the Committee. With the aid of comments and suggestions received from members of the Committee, a second draft of this report was made ready in print as the groundwork of the deliberations of the Committee at their final meeting, which was held at Columbia College from the 8th to the 11th of November, 1893. The vigorous discussions at this prolonged meeting resulted in a thorough revision of the second draft.

The report of the Committee of Ten and the nine reports of the conferences immediately engaged the attention of thousands of teachers in colleges and schools all over the country, and became objects of close attention in all teachers' meetings and in all college Faculties. William T. Harris, then Commissioner of Education but earlier Superintendent of Schools at St. Louis, and always an educational philosopher, wrote to the Secretary of the Interior, Hon. Hoke Smith, on December 8, 1893, in a letter intended to accomplish Secretary Smith's expressed wish that the reports be printed as one of the documents of the Bureau of Education, as follows:

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"The recommendations of this report will draw the attention of great numbers of teachers to the question of educational values, and this will lead to a better understanding of what the pupil should study to gain the most from his work in school. In this respect I consider this the most important educational document ever published in this country."

Whoever reads to-day the reports of the nine conferences will find in them all the suggestions which have led to educational progress during the past twenty-eight years. They are fruitful still. He will find there many suggestions as to the means of *interesting* every pupil in every school, public or private, elementary or secondary, in his daily work, and how to get from every pupil *hard work* but willing; how to make the teaching of every subject *concrete*, and to relate it to something in the life of the child or the youth, so that he may see the application and *usefulness* of each lesson, and how it *concerns him*; how to teach subjects in *groups* and not singly in a detached way, as, for example, how to teach together arithmetic, algebra, and geometry, or history, government, and economics, or geography, history, and biography; or again, how to teach *English* in connection with every other subject on the programme, and so to develop the capacity and *desire* to narrate or describe accurately and vividly.

The reports of the nine conferences declare the principles on which election of studies should be introduced into secondary schools as well as into colleges; but it was left for the Committee of Ten to indicate in tabular form the manner of introducing those principles. It was the Committee of Ten which constructed, as guides for school principals and superintendents, a table exhibiting the amount of

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instruction, estimated by the number of weekly periods assigned to each subject, to be given in a secondary school during each year of a four-years' course, on the supposition that the recommendations of the conferences were all to be carried out; and also a table showing how to give effect to the fundamental conception of all the conferences, namely, that all the subjects which make a part of the secondary school course should be taught consecutively enough and extensively enough to make every subject yield the training it is fitted to yield. The Committee also prepared four working programmes for a secondary school which they recommended for trial wherever the secondary school period is limited to four years. These programmes are called Classical, Latin-Scientific, Modern Languages, and English. All four may be combined in one programme with options by subject for the pupil. The most striking differences in the four programmes will be found to be the relative amounts of time given to foreign languages. The most important principle in programme making which all the nine conferences advocate is as follows:

"Every subject which is taught at all in the secondary schools should be taught in the same way and to the same extent to every pupil so long as he pursues it, no matter what the probable destination of the pupil may be, or at what point his education is to cease." This was at the time a revolutionary proposal, and therefore one sure to encounter many obstacles, theoretical and practical, general and local. Nevertheless, every intelligent Superintendent or Principal in the country has been trying since 1893 to apply that principle in his system or his school, as fast and as far as local public opinion and local school resources permitted. The resulting improvements are already great; but much remains to be done.

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It is important to notice the limits of this fundamental principle. It does not affirm that all pupils should study the same subjects, or that all pupils should pursue any given subject the same length of time. On the contrary, the conferences and the Committee of Ten believed that the utmost elasticity of programme and variety of subject should exist in every secondary school, in order that the individual pupil might enjoy an adequate freedom. It was the main object of the appointment of the Committee of Ten to procure, if possible, a higher degree of uniformity in school programmes and in requirements for admission to college than then existed; and therefore it was for the Committee to consider with special care what kind of uniformity was desirable and what undesirable. The ninety-nine teachers who constituted the Committee of Ten and its conferences said unanimously that uniformity should apply to the method of teaching and to the selection of the topics in each subject taught at all in a secondary school, but not to the selection of subjects by the individual pupil or to the length of time that the individual pupil should pursue each subject. The programmes laid down by the Committee of Ten provide the indispensable uniformity and the equally indispensable liberty. For each institution or each local school system the limitations on liberty proceed from the inevitable limitations on expenditure. It was a striking fact that "Ninety-eight teachers, intimately concerned either with the actual work of American secondary schools, or with the results of that work as they appear in students who come to college, unanimously declare (1892) that every subject which is taught at all in a secondary school should be taught in the same way and to the same extent to every pupil so long as he pursues it, no matter what the probable destination of the pupil may be, or at what point his education is to cease"

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(from the Report of the Committee of Ten). This statement is still having a strong effect on current discussions about the point at which determinations of the probable life career should be allowed to determine the school career. A democracy naturally desires to postpone as much as possible the partings of ways.

There was another point in which the recommendations of the conferences closely resembled each other. They all, except the Greek conference, seemed to wish to get their subjects studied earlier than they were then. This general desire caused the conferences to deal considerably with the programmes of elementary schools. Indeed, some of the most interesting suggestions made by the conferences related to the primary and grammar schools. It was very plain also that the teachers interested in the subjects comparatively new in secondary schools, namely, English, the modern languages, chemistry, physics, natural history, and history wished to get their subjects placed on a perfect equality with the old subjects in school programmes, and believed that the interests of education demanded this equality. They believed that the new subjects could be made equal in dignity and difficulty to the old subjects, and therefore equal in training power. They also believed that they could be made equal, if not superior, in interest or power to attract and hold the attention of pupils. They did not ask that all subjects receive equal attention in a given school or from a given pupil. Evidently, to the establishment of an equality among subjects, an approximate equality of time-allotment is essential, hence the importance of the function of the Committee of Ten in suggesting time-allotments. No comprehensive policy in regard to the comparative treatment of different subjects can be properly carried out without careful attention to the subject of time-allotments.

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The report of the Committee of Ten pointed out that on adding up all the claims for time on secondary school programmes which resulted from the combined recommendations of the conferences, the total amount was by no means out of the question for many schools, even if their pecuniary resources could not be increased. Indeed, it appeared that this sum total was exceeded in several American secondary schools already, and among these schools were to be found public schools as well as endowed academies. These facts were a welcome surprise to most of the members of the Committee of Ten. It should be borne in mind, however, that in any school which is competent to provide the number of weekly school periods demanded by all the conferences, selection of studies for the individual pupil becomes inevitable. Of course, any school can make the selection by establishing different four-year courses for pupils of different destinations. The uniformity which is desirable to procure all over the country is uniformity of teaching methods by subject and of the sequence of subjects by year. Such uniformity would greatly improve the relations between secondary schools and colleges, and would also diminish the losses which now result from the frequent transfers of pupils from country to city, or from one city to another over the broad national area. There is another important improvement in American education which may be hoped for as a result of that degree of uniformity in school programmes which the Committee of Ten recommended; and already some gains have been made in this respect. Among the colleges, universities, technical schools, and agricultural schools of the country there has existed a considerable variety of admission requirements by groups. A candidate for admission who proposes to study for the degree of Bachelor of Arts must conform to higher admis-

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sion requirements than a candidate for the degree of Bachelor of Philosophy or Bachelor of Science. The degree of Bachelor of Agricultural Science may be obtained on still lower admission terms. Yet there is little difference of age in the candidates for these various degrees. The great majority of American colleges and universities admit to the Freshman class, or indeed to a higher class, on the certificates of the schools in which the candidate was prepared.

The adoption of the recommendations made by the nine conferences and the Committee of Ten in respect to secondary school programmes, the methods of teaching each subject, and the establishment of equality in dignity and time-allotment among the various subjects taught in secondary schools would contribute very much to the abolition in American higher education of the evils just described. It should make no difference to a college or scientific school whether a given candidate for admission had studied one set of eight or nine subjects recommended by the conferences for a four-year course, or another set of equal value. Much progress has been made in this matter since 1893; but it is obvious that much remains to be done before the equality of the Latin-Scientific, Modern Languages, and English programmes with the Classical can be established in practice. The thing desirable is that close connection be established between the secondary schools and the institutions of higher education by making requirements for admission to the higher match requirements for graduation at the lower.

The nine conference reports are full of hope and promise for the future. Whoever reads them to-day with an open mind cannot fail to see that great improvements in American education have resulted from their suggestions, worked out or applied by thousands of teachers and school and

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college officials by slow degrees and painful steps. The achievements of these teachers and officials are great already and will stimulate their successors in the same fine enterprise.

It remains to consider the improvements in American education which have taken place, or are in near view, since the United States went to war with Germany in April, 1917, that is, during the four most pregnant years in American history. Congress and the Administration united in a strenuous endeavor to create quickly a huge national army by draft. The examinations which drafted men were required to undergo revealed two facts about the mass of the population included in the draft which took the people of the United States and its Government by surprise, and made them both eager for remedies. The first was the amount of illiteracy. The second was the amount of venereal disease. Two prompt conclusions were arrived at. First, that the education of the entire people could not be left exclusively in the hands of the states and the municipalities, but must be treated as a fundamental national interest. Secondly, that the entire army and navy must be instructed, in their camps and cantonments, in the means of avoiding and preventing venereal diseases, in order that the army in France might be kept fit to fight. Some guidance to this latter resolution had come earlier from the official reports from Henry L. Stimson, Secretary of War in President Taft's cabinet, who had published the fact that the American Regular Army of that day suffered more from venereal diseases than any other army in the world; and from the action of Commanders of the National Guard which made part of the force that in 1912 guarded the Mexican boundary, these commanders having shown how

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to protect their men from the portable villages of prostitutes which were promptly established in the immediate vicinity of the camps, and with which the officers of the Regular Army had no disposition to interfere. The instruction administered to the army was of the crudest sort; for it was given to the men through a dictation by young officers from small hastily prepared manuals, which, however, were written by competent persons. The camps and cantonments in this country were energetically defended against both brothel and saloon, on the ground that each fed victims to the other. These measures proved remarkably effective; and the American people drew the conclusion that it was not only desirable but feasible to prevent venereal diseases in the mass of the population on a great scale. Hence a resolution on their part that the needed instruction on this subject should be given thereafter in all American schools, as part of a universal course on biology and public health. The accomplishment of this purpose is well under way, though by no means completed.

At the same time many non-governmental agencies set to work to contend against the evil of illiteracy. The Young Men's Christian Association became active in the work of teaching recent immigrants from alien races the English language and the elements of civics, winning to their classes both young men and adults. Numerous Cosmopolitan Clubs were organized in factory towns in the eastern part of the country, which devoted themselves to similar kinds of teaching. The chief emphasis was placed on the teaching of the English language, and during the two years and a half which have elapsed since the armistice, much success has attended these efforts.

This success is a strong encouragement to the idea dawning among thinking Americans that popular education should

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by no means be confined to children under fourteen or under eighteen, or to young people under twenty-four, but should be carried forward by evening schools, Saturday classes, and vacation schools, after regular attendance at school or college has ceased. Immediate results appear in the raising of the age of compulsory attendance at school, in the creation of the Junior High School, of the evening classes in technical institutes for boys and young men who are already at work in trades, and in the many offerings by universities of short courses in medicine, business administration, teaching, and engineering specialties for men who have already entered on the practice of their professions. The national government, the states, and various institutions of higher education are already offering numerous courses of this nature for adults. Progress in this direction is greatly stimulated by the new dangers that threaten democracy. The labor troubles, for example, proceed from a lack of intelligence and reasoning power in large bodies of voters, who may be consumers, employers, or employees. The recent enactments about the tariff have similar sources in the ignorance and lack of reasoning power among millions of our people. The only way to overcome these evils which result from the general lack of trained senses, practice in reasoning, and trustworthy information, is to strengthen the education of both the young and the adult.

A small amount of schooling was enough for the voters of town meetings in the New England of two hundred years ago, or one hundred years ago. It is not enough for the voters of continental United States to-day who are called upon to act by their votes, or by the votes of the representatives they select, on national and international problems which are both strange and vast—too vast indeed for ex-

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perienced statesmen as well as for the populace. Even in the comparatively simple field of military and naval operations, the Great War produced no military or naval commander competent to deal with the vast extensions of area and extraordinary novelties in modern warfare. In the same way no religion, Confucian, Buddhist, Brahmin, Mohammedan, or Christian, has developed during the past seven years any new strong hold, either on its own people or the other peoples. At this moment all the Christian churches, denominations, or sects are wondering how they can recover their former hold on their several bodies or groups. Every secular or religious organization and every state or nation seems to need more intelligence, more vision, and more sense of duty toward the high calls of honor and conscience. There is but one road upward—more education, and wiser.

The national government has for many years maintained scientific establishments for national uses, such as the United States Coast Survey, the Naval Observatory, the Boards for maintaining a national quarantine, and the various bureaus in the Departments of Agriculture, the Interior, and the Treasury, which deal with Conservation, Forestry, Parks, and Irrigation. The war added greatly to the number of applied science commissions in the government service, such as the Commissions on Explosive Engines, Aëroplanes, and Poison Gas. Some of these scientific activities have survived the armistice, particularly those which affect the education of the people and the public health. Beside the national government, several states have taken on new functions in support of popular education. For example, Massachusetts has passed a carefully considered law which helps the schools of rural communities practically at the expense of the urban. Large appropriations have already been

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made by Congress to be distributed by a national health board or commission among the states which are prepared to coöperate with the government in treating and preventing diseases. Although national aid to universal physical training is not yet consummated, it is plain that before long the national government will distribute such aid, and the states carry the beneficent plan into execution. This great improvement, though suggested by the experience of the nation at war, is really a great step forward toward national health and happiness, and industrial efficiency.

The national efficiency in time of war called for the service of experts in great variety, chemists, physicists, biologists, psychologists, and engineers; and the whole people acquired a new sense of the value of experts, and of the institutions which train them. There have resulted extensive improvements in those institutions. A curious case of carrying over into peace times a war invention, is the use of the psychological tests applied to the classification of recruits for the army and navy to the classification of school children.

Since 1914 financial and manufacturing corporations have manifested an increasing desire for graduates of colleges or technical schools as managers, superintendents, and employment agents. Many of these corporations affirm that the kind of managers and superintendents now needed cannot be brought up in the works, but must have received an appropriate training in good secondary schools, colleges, technical schools, or the graduate departments of universities.

Seeing these things, intelligent parents keep their children at school as long as they can, instead of putting them to earn money for the family as soon as the law allows, or before. Hence the extraordinary resort to colleges and

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technical schools since the armistice, and the vigorous efforts to raise new endowments for these institutions, many of which have been highly successful.

These achievements and tendencies loudly proclaim that secondary schools and all the institutions of higher education have made great gains since the twentieth century opened, and are going to make many more as the twentieth century advances.

It remains to mention the remarkable educational enterprise on which the democratic government of the United States has embarked since it went to war with the autocratic government of Germany—the Prohibition enterprise. Prohibitory legislation began in the States, first in Maine, later in Kansas, and later still in some Southern states. The national movement began with the war; and national scope and purpose were necessary to its success. It rests solidly on a Constitutional Amendment adopted by large majorities, and on acts of Congress which commended themselves to both political parties, and secured strong majorities. It is a hopeful effort to teach the entire people that alcoholic drinks never do any good, usually do harm, often destroy family happiness, and as a rule impair productive efficiency in the industries of the country. This teaching, to be effectual, must ultimately be based on prolonged experience with prohibitive legislation. It involves continuous and universal instruction in the schools and homes of the rising generation—instruction both scientific and ethical. It also involves a considerable advance in the ethics of the medical and legal professions, and in their sense of responsibility to the community. No other national government, democratic or autocratic, has ever attempted such a vast philanthropic and educational enterprise.

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All men and women who believe that education is the best safeguard of democracy may rest content with the progress of education in the United States since the Civil War.

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